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ABSTRACT

The Office of Academic Support and Instructional Services (OASIS) at the University of California at San Diego sponsors a workshop that teaches tutors to use five types of probing skills. The use of the skills is fundamental to the student learner's acquisition of complex relationships and problem solving skills. The five types of probes are: clarification (direct questions that ask students to reiterate their responses), critical awareness (help students justify their answers), refocus (focuses the student's attention on relationships), prompt (giving a hint when the student seems unable to answer), and redirect (asking another student to respond or comment). The workshop was designed to introduce probing skills as an important tool in tutoring, provide participants with examples of probing skills, give practice using probing skills, and demonstrates how the OASIS program conducts a workshop as part of a four-unit course on tutor training. Videotapes are used as are discussion and observation. (Appendixes include a summary of probing techniques and examples of each and a probing skills coding form.) (TJ)

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PROBING SKILLS FOR TUTORS

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PROBING SKILLS FOR TUTORS

The tutor asks a question.

The student answers.

The tutor probes . . .

Rationale

Probing is the skill of asking penetrating questions in response to a student's initial answer. Probing leads a student to discover the relationships, similarities and differences that distinguish new concepts from old. When probed, the student is required to articulate the more subtle attributes of the topic under discussion thereby reinforcing the connections between new material and previously learned material.

Question-asking has long been recogized as an essential teacher skill (Stevens [5], Taba [6], Hunkins [2], and Sadker [4]). Questions which provide students with practice

in discrimination and generalization, and which teach them verbal mediation are especially crucial in learning abstract principles and concepts (De Cecco [1]). Probing takes question-asking a step further because the focus of the probe is the student's response.

Although probing skills were initially designed with the teacher/student interaction in mind, probing skills are appropriate and, it could be argued, essential in any situation where a student's active participation is desired. Probing skills are especially appropriate for peer counselors and tutors who help other students acquire problem-solving skills. As tutors probe, they focus discussion, they offer practice in critical thinking, and they present a role-model for problem solving.

Probing Skills in Practice

Tutor Questions

The skillful counselor posits a series of questions designed to lead the student to articulate the network of relationships and associations pertinent to the subject under discussion. Thus, an interview with a failing student may include, "Are you sure you want to be here?", "What are your goals?", and, "How do your parents feel?" Likewise, an Economics tutorial session includes not only, "What is marginal cost?", but, "What should be the relationship between marginal cost and marginal revenue when a firm wants to maximize profit?"

The student's response to each of these questions can be probed further. For example, the economics tutor who receives

an answer that "Marginal cost is the cost of producing an additional output.", could probe further by asking, "Why is it called marginal?" or, "What do you mean by additional?" to ensure the learner fully understands the concept of marginal cost and is not just repeating a memorized phrase.

Types of Probes

The typology of probes articulated in the OASIS Tutor Training Program is adapted from Miezitis and Orme (3). The five types of probes included in this typology are: 1) clarification; 2) critical awareness; 3) refocus; 4) prompt; and 5) redirect.

The first three probes represent an unfolding or hierarchy of concerns. Clarification is the term given a direct teacher question that asks the student to reiterate his response. "What do you mean by . . . ?" "Be more specific." "In what way?" "Anything else?" All are examples of clarification probes, and are appropriate when the student's answer is judged to be vague or unclear.

When the tutor suspects that the student does not fully understand, or wants the student to reflect upon an answer, the tutor might ask: "Why would that be so?" "How would you do that?" "What are you assuming?" "How can you be sure?" These probes are labeled critical awareness. They have as their goal the student capable of justifying answers.

The third type of probe in this series is labeled refocus. This type of probe focuses the student's attention on relationships. A tutor might ask, "How is this related to . . .?", or, "If that is true, then what would happen if . . .?", or, "What

would _____ (another person or group) say about it?" This type of probe is called a refocus because it causes the student to see the concept in perspective. When a student can approach a topic from an entirely separate point of view, it demonstrates objectivity and often makes demarcations clearer.

Each of these three probes ensures the student's attention to the details of the topic under discussion.

The fourth type of probe is called a prompt. Often students respond to teacher questions with lowered heads and mumbled "I don't know's". In classrooms where "right" answers are stressed, students can develop the habit of avoiding an answer even when they have an idea about what it might be. When the teacher hints or prompts, however, the student has the benefit of hearing the question rephrased and/or having his hypothesis partially confirmed. Prompting demonstrates the tutor's interest in hearing from the student, as well as reinforcing the habit of searching for answers as opposed to relying solely on memory.

The final type of probe, a redirect, is used when there is more than one student, to include others in the process. Student #2 is invited to comment or add to Student #1's answer: "Tom, do you agree with what Vera said?", or, "Barry, can you give us another example?" The content of a redirect probe could actually be any of the first three probes, but if it is directed to a student other than the person who initially responded, it is called a redirect.

Probing Skills Workshop

The OASIS Probing Skills Workshop was designed to reach the following objectives:

1. To introduce the concept of probing skills as an important tool in tutoring or peer counseling.
2. To provide workshop participants with the opportunity to view examples of probing skills.
3. To provide workshop participants with the opportunity to practice probing skills.
4. To provide workshop participants with a demonstration of how the OASIS Tutorial Program at UCSD conducts a workshop for tutors as part of its four-unit Tutor Training course.

In the Probing Skills Workshop, participants view a videotape which presents definitions and examples of each type of probe followed by a tutoring segment which demonstrates the probe. A second videotape portrays a group tutorial session. This second tape is used as a stimulus for participants to practice coding tutor comments according to the various types of probes. Two forms are distributed to workshop participants to facilitate recognition: the Summary of Probing Techniques and Selected Examples (Appendix A), and the Probing Skills Coding Form (Appendix B).

Objectives 3 and 4 are met by dividing participants into small groups, and offering each person the opportunity to role-play a tutor, a student, and an observer. Tutors concentrate on

probing; students are requested to be cooperative but naive students; and observers again practice coding counselor responses to determine probing categories. Group discussion focuses on feedback from the observer to the tutor in the form of number and range of probing categories used and appropriateness of the probes to the teaching objectives.

In assessing the probing patterns typically generated by novice tutors, it has been this writer's experience that most persons have habitual speech patterns that make acquisition of new verbal (probing) skills sometimes difficult. Even when the tutor is consciously trying to generate different types of probes, frequently there is a pattern of extended use of one type and neglect of others. The opportunity to observe others as well as to practice probing are both essential to the acquisition of probing skills.

As observers and tutors exchange roles and discuss probing categorizations, often there is clarification of meaning as well as added insight into the tutoring or counseling process. Tutors, for example, often come to tutoring with an implicit model of lecturing as the appropriate teaching mode. On the other hand, a criticism that has been made of some counselors is that in their effort to reflect student feelings, students often come away feeling the counselor was uninvolved and not helpful. Judicious use of probing skills is applicable to both settings.

As with any new skill, to ensure the practice of probing skills, it is important that the Probing Skills Workshop be

followed up by further reinforcement. In the Tutoring Program at UCSD, tutors must be observed by Peer Tutor Coordinators. During some portion of the tutoring observation, coordinators code tutor questions for probing types. Since probing skills demonstrate the tutor's sophistication with material, coordinators are able to give tutors feedback on content as well as process.

Probing skills would appear to be fundamental to the tutoring/counseling process. When practiced correctly they ensure student participation as well as demonstrate the tutor's analysis of a situation. They are a powerful tool in the perennial quest for "how do you teach people how to think?"

References

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Appendix A

Summary of Probing Techniques and Selected Examples

Basic Rules:

(1) Any tutor response which immediately follows a student response is either a NON-PROBE or a PROBE.

(2) A PROBE: Is a tutor response which requires a student who has just responded to go beyond that first response - to clarify it, justify it, further explain it, relate it to another idea, etc.

Types of Probes and Examples of Probing Responses

I. Clarification: (Tutor asks the student for more information or meaning):

Examples of Clarification:
"What do you mean by _____ ?"
"Tell us more . . . "
"What else did they do?"; "Anything else?"
"Be more specific."; "In what way?"

II. Critical Awareness: (Tutor asks student to justify his answer, to reflect on it):

Examples of Critical Awareness:
"What are you assuming?"
"Why would that be so?"
"How can that be?" "How would you do that?"
"Are you sure?" "Give an EXAMPLE of that."
"What do we need to know in order to solve the problem?"

III. Refocus: (Tutor asks student to relate his answer to another idea or topic):

Examples of Refocus:
"How is that related to . . . ?"
"Can you SUMMARIZE the discussion up to this point?"
"PRETEND (Suppose) you are . . . then what?"
"How does your response tie into . . . ?"
"If that is true, then what would happen if . . . ?"
"What would _____ (another person, group) say about it?"
"How is your answer (point of view) different from _____ ?"

IV. Prompt: (Tutor gives student a hint, or else Tutor rephrases his question to help student respond: Tutor has questioned student, but student can't or doesn't answer. Tutor therefore rephrases, or makes the probe easier to answer by):

1. Giving a hint.
2. Asking for an example, etc.

V. Redirect: (Tutor changes the direction of interaction from Student 1 to Student 2. Tutor is asking Student 2 to respond to the first student's response.)

PROBING SKILLS CODING FORM
for use with Practice Tape #1

RULES: 1. Any tutor response which immediately follows a student response is either a PROBE or a NON-PROBE.

2. A PROBE is a tutor response which requires a student who has just responded to go beyond that first response - to clarify it, to justify or reflect on his answer, to relate it to another idea, etc.

Five types of probes are:
1. Clarification
2. Critical Awareness (Reflection)
3. Refocus
4. Prompt
5. Redirect

As the tutor conducts his teaching session, you are to categorize each of his responses according to the categories listed. The tutor's key words are listed to help you categorize each of his remarks.

TEACHER RESPONSE	PROBES					
	CLARIFY	REFLECT	REFOCUS	PROMPT	REDIRECT	NON-PROBE
Sue, what are two systems?						
what systems involve						
define vital						
general meaning						
Necessary for what?						
clarify why necessary						
any function Mike forgot						
relate circulatory to respiratory						
What are you assuming?						
What does Mike's answer assume?						
Mike, see what you assume?						
Where does transport occur?						
what if it didn't						
does it only deliver						
which gas expelled						
what molecule						
tie to vital						
summarize						